

What is claimed is:

1. A wellbore tractor comprising:
a tractor body;
a central fluid passageway extending through the length of the tractor body;
a return fluid passageway; and
a means for driving the tractor through the wellbore.
2. The wellbore tractor of claim 1, wherein the return fluid passageway further comprises one or more flow conduits.
3. The wellbore tractor of claim 2, wherein the area between the surface of the central passageway and the outer surface of the tractor body define the wall of the tractor body and the one or more flow conduits extend longitudinally through at least a portion of the wall of the tractor body.
4. The wellbore tractor of claim 2, wherein the one or more flow conduits comprise one or more external flow channels extending along at least a portion of the outer surface of the tractor body.
5. The wellbore tractor of claim 2, further comprising a fluid manifold in fluid communication with the one or more flow conduits.
6. The wellbore tractor of claim 3, wherein the one or more flow conduits extend substantially the length of the tractor body.
7. The wellbore tractor of claim 4, wherein the one or more external flow channels extend substantially the length of the tractor body.
8. The wellbore tractor of claim 1, wherein the return fluid passageway is arranged side-by-side with the central fluid passageway.
9. A wellbore tractor comprising:
a tractor body;
a central fluid passageway extending through the length of the tractor body;
one or more rearward facing jets extending through the tractor body and in fluid communication with the central fluid passageway; and
a means for driving the tractor through the wellbore.

10. A method of moving a coiled tubing tractor through a wellbore containing sand, the method comprising the steps of:
running a coiled tubing tractor assembly on a coiled tubing into the wellbore, the tractor assembly comprising one or more forward facing jet nozzles, a jet pump and the tractor;
removing a sand bed ahead of the tractor by fluidizing the sand particles with the one or more forward facing nozzles to create a sand-laden slurry;
pumping the sand-laden slurry via the jet pump past the trailing end of the tractor; and
driving the tractor through the portion of the wellbore that previously contained the sand bed.
11. The method of claim 10, further comprising pumping the sand-laden slurry through one or more return flow conduits of the tractor and expelling the slurry through the trailing end of the tractor.
12. The method of claim 10, further comprising depositing sand from the sand-laden slurry in the wellbore behind the tractor.
13. The method of claim 12, further comprising circulating the sand out the wellbore.
14. The method of claim 12, further comprising sweeping the sand out of the wellbore while pulling out of the hole with the coiled tubing tractor assembly.
15. The method of claim 14, further comprising sweeping the sand out of the wellbore with one or more rearward facing jets located between the tractor and the coiled tubing.
16. The method of claim 14, further comprising sweeping the sand out of the wellbore with one or more rearward facing jet nozzles located on the tractor.
17. A method of moving a coiled tubing tractor through a wellbore containing sand, the method comprising the steps of:
running a coiled tubing tractor assembly on a coiled tubing into the wellbore, the tractor assembly comprising one or more forward facing jet nozzles, the tractor and one or more rearward facing jet nozzles;
removing one or more sand beds ahead of the tractor by fluidizing the sand particles with the one or more forward facing nozzles;
maintaining the sand in fluid suspension with the rearward facing nozzles until the sand particles settle behind the tractor; and

driving the tractor through the portion of the wellbore that previously contained the one or more sand beds.

18. The method of claim 17, further comprising circulating the sand out the wellbore.
19. The method of claim 17, further comprising sweeping the sand out of the wellbore while pulling out of the hole with the coiled tubing tractor assembly.
20. The method of claim 19, further comprising sweeping sand out of the wellbore with a jetting tool located between the tractor and the coiled tubing, the jetting tool having one or more rearward facing jet nozzles.
21. A coiled tubing tractor assembly comprising:
a forward jetting assembly operable to fluidize sand beds ahead of a coiled tubing tractor;
the coiled tubing tractor having a tractor body, a central fluid passageway and a return fluid passageway; and
a jet pump connected between the forward jetting assembly and the tractor, wherein the jet pump is operable to pump the fluidized sand through the return fluid passageway to expel the fluidized sand past the trailing end of the tractor.
22. The assembly of claim 21, further comprising a rearward-jetting tool operable to circulate the sand behind the tractor out of the wellbore.
23. The assembly of claim 21, wherein the forward jetting assembly comprises one or more angled jet nozzles.
24. The assembly of claim 21, wherein the forward jetting assembly comprises a rotating jetting head.
25. The assembly of claim 21, wherein the return fluid passageway comprises one or more flow conduits.
26. The assembly of claim 25, wherein the surface of the central passageway and the outer surface of the tractor body define the wall of the tractor body and the one or more flow conduits extend longitudinally through at least a portion of the wall of the tractor body.
27. The assembly of claim 25, wherein the one or more flow conduits comprise one or more external flow channels extending along at least a portion of the outer surface of the tractor body.
28. The assembly of claim 25, further comprising a fluid manifold in fluid communication with the one or more flow conduits.

29. A coiled tubing tractor assembly comprising:
a forward jetting assembly operable to fluidize sand beds ahead of a coiled tubing tractor;
the coiled tubing tractor having a tractor body, a central fluid passageway extending
through the tractor body, and one or more rearward facing nozzles extending
through the tractor body and in fluid communication with the central fluid
passageway, the rearward facing nozzles operable to maintain the sand in fluid
suspension until the sand travels past the tractor.
30. The assembly of claim 29, further comprising a rearward-jetting tool between the tractor
and a coiled tubing string.
31. A method of driving a coiled tubing tractor through a wellbore, the method comprising
the steps of:
providing a coiled tubing tractor assembly on a coiled tubing in a wellbore, the tractor
assembly comprising one or more forward facing jet nozzles, a jet pump and the
tractor;
circulating a power fluid through the tractor and out the one or more forward facing jet
nozzles to create one or more jet streams in the wellbore ahead of the tractor
assembly;
pumping at least a portion of the jetted power fluid in the wellbore past the trailing end of
the tractor with the jet pump; and
driving the tractor through the jetted section of the wellbore.
32. The method of claim 31, comprising fluidizing particulates ahead of the tractor assembly
with the one or more jet streams.
33. The method of claim 32, further comprising pumping the fluidizing particulates past the
trailing end of the tractor with the jet pump.
34. The method of claim 31, further comprising pumping the portion of the jetted power fluid
through one or more return flow conduits of the tractor.
35. A method of driving a coiled tubing tractor through a wellbore, the method comprising
the steps of:
providing a coiled tubing tractor assembly on a coiled tubing in a wellbore, the tractor
assembly comprising one or more forward facing jetting nozzles, the tractor and
one or more rearward facing jetting nozzles;

- circulating a portion of a power fluid through the tractor and out the one or more forward facing jetting nozzles to create one or more jet streams in the wellbore ahead of the tractor assembly;
- circulating another portion of the power fluid through the one or more rearward facing jetting nozzles; and
- driving the tractor through the jetted section of the wellbore.
36. The method of claim 35, comprising fluidizing particulates ahead of the tractor assembly with the one or more jet streams from the forward facing jetting nozzles.
37. The method of claim 36, comprising maintaining the fluidized particulates in fluid suspension with the rearward facing jetting nozzles.
38. A method of driving a coiled tubing tractor through a flowline, the method comprising the steps of:
- providing a coiled tubing tractor assembly on a coiled tubing in a flowline, the tractor assembly comprising one or more forward facing jet nozzles, a jet pump and the tractor;
- circulating a power fluid through the tractor and out the one or more forward facing jet nozzles to create one or more jet streams in the flowline ahead of the tractor assembly;
- pumping at least a portion of the jetted power fluid in the flowline past the trailing end of the tractor with the jet pump; and
- driving the tractor through the jetted section of the flowline.
39. The method of claim 38, comprising fluidizing particulates ahead of the tractor assembly with the one or more jet streams.
40. The method of claim 39, further comprising pumping the fluidizing particulates past the trailing end of the tractor with the jet pump.
41. The method of claim 38, further comprising pumping the portion of the jetted power fluid through one or more return flow conduits of the tractor.
42. A method of driving a coiled tubing tractor through a flowline, the method comprising the steps of:

- providing a coiled tubing tractor assembly on a coiled tubing in a flowline, the tractor assembly comprising one or more forward facing jetting nozzles, the tractor and one or more rearward facing jetting nozzles;
- circulating a portion of a power fluid through the tractor and out the one or more forward facing jetting nozzles to create one or more jet streams in the flowline ahead of the tractor assembly;
- circulating another portion of the power fluid through the one or more rearward facing jetting nozzles; and
- driving the tractor through the jetted section of the flowline.
43. The method of claim 42, comprising fluidizing particulates ahead of the tractor assembly with the one or more jet streams from the forward facing jetting nozzles.
44. The method of claim 42, comprising maintaining the fluidized particulates in fluid suspension with the rearward facing jetting nozzles.